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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/562,817

12/30/2005

Nobumasa Ootake

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WENDEROTH, LIND & PONACK, L.L.P.

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SUITE 800

WASHINGTON, DC 20006-1021

EXAMINER

ZIMMER, MARC S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/562,817	<b>Applicant(s)</b> OOTAKE ET AL.	
	<b>Examiner</b> MARC S. ZIMMER	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13, 14 and 26-31 is/are rejected.
- 7) ☒ Claim(s) 15-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

In the earlier correspondence, the Examiner had held various claims as being allowable over the prior art including U.S. Patent # 7,169,873, which had been cited against claims 18-24. Though the record isn't clear as to why some claims had been deemed patentable, it can at least be said that the aforementioned document never actually teaches the protonated homologue of the compound outlined in formula (2) set out in column 8. Upon reconsideration, the Examiner believes that at least some of the product claims should have been rejected under 35 U.S.C. 103 for the reasons delineated *supra*.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 13-14, and 26-31 are rejected under 35 U.S.C. 103(a) as being obvious over Morimoto et al., U.S. Patent # 7,169,873 in view of Lichtenhan et al., U.S. Patent Application Publication No. 2003/0055193.

The applied reference has a common assignee/inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed

subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

To reiterate, the Examiner acknowledges that the reference never expressly discloses a protonated form of the compound represented by formula (2). That being said, it is noted that the role of this compound is to behave as a precursor to the silsesquioxane compound displayed in formula (1). The reaction entails reacting the compound in formula (2) with any of compounds (3) through (5) in columns 8 and 9. These reactions are not unlike the known corner-capping reactions of incompletely-condensed silsesquioxanes to yield completely-condensed silsesquioxanes. In this connection, it is noted that Lichtenhan et al. have contemplated the employment of silanol-functional precursors for corner capping reactions instead of silanol salts. See Scheme 1 on page 5 of U.S. Patent Application Publication No. 2003/0055193. It is, therefore, the Examiner's position that the silanol-functionalized homologue would be a recognized equivalent precursor for preparing the silsesquioxanes (1) contemplated by Morimoto et al.

Although the Examiner believes that the doctrine of equivalency may be adequate to support this rejection, it is also submitted that the skilled artisan would be motivated to replace the salt precursor with the silanol precursor for the reason that a sodium salt is formed as a by-product of the process of making the silsesquioxanes (1) disclosed by Morimoto and, thus, a filtration step or possibly a water-extraction step would be required to isolate the product from the salt whereas no such purification step would be needed were the silanol employed as the precursor. It is appreciated, at the same time, that reaction of the silanol with the chlorinated organosilicon compounds would yield corrosive HCL as a by-product which is why the skilled artisan might also be motivated to replace the chlorinated organosilicon compounds with ones bearing alkoxy groups as was done in the Lichtenhan disclosure. In this way, the by-product is a volatile by-product that doesn't possess the same noxious and corrosive attributes as does hydrochloride gas.

As for claims 29-31, these hydrolytic groups are all recognized equivalent alternatives of the chloro-/alkoxy groups mentioned by the Morimoto and Lichtenhan disclosures.

***Allowable Subject Matter***

Claims 15-25 are allowable.

This rejection has not been made final insofar as the Examiner introduced a new rationale for rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARC S. ZIMMER whose telephone number is (571)272-1096. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jim Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

April 2, 2008

/Marc S. Zimmer/  
Primary Examiner, Art Unit 1796